

## The Impacts of Broadband Internet and Related Technologies on the Value Chain of the Tourism Sector in Kenya

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### Abstract

Information and communication technology (ICT) infrastructure development has been associated with impacts on gross domestic product of nation states. The arrival of the undersea fibre bandwidth in East Africa was expected to have huge effects in the national economies in the sub-region. This paper analyses the impact of fiber optic broadband connectivity and related technologies on the tourism value chain in Kenya. Data was collected through an exploratory survey of 40 organizations in the tourism sector. Interviews were held with sales managers, directors, general managers or deputy general managers from tourism authorities, tour operators, travel agencies, hotels, tour guides, taxi operators, beach operators, and ancillary service providers. Data was collected over twelve months, between April 2012 and March 2013. Data analysis was carried out through coding of all interview logs and transcriptions in order to identify and determine the most dominant concepts found in the dataset using NVIVO, an automated qualitative data analysis tool. The emerging findings were then divided into thematic categories and summarized. This paper provides initial findings from a preliminary analysis of the evidence using Michael Porter's Five Forces Model as an analytical lens. The paper establishes that broadband internet and related ICTs have brought about varying changes in the bargaining powers of both suppliers and customers, changed the basis of rivalry among existing competitors and reduced barriers to entry for new players. It also provides conflicting findings on the intermediation effects of these technologies. In addition to these impacts, the paper highlights the challenges with adoption of broadband internet and related ICTs in the sector and ends with some conclusions.

### Introduction

The tourism sector is one of the six key pillars for growth under Kenya's economic blueprint (Kenya Vision 2030) and a focal part of the hospitality industry in Kenya. The sector plays a major role in the economy of the country. According to the Economic Survey report 2013, tourism revenues, which are a key source of foreign exchange earnings, were KSh. 96.0 billion (about US\$ 1.2 billion) in 2012. It contributes about 12.5 per cent to the country's Gross Domestic Product (GDP).

Kenya's tourism sector has three major products: Safari tourism, Coastal tourism and business and conference travel. Other products have been included in the tourism product line which includes adventure, sports, culture, golfing and birding. The sector is highly fragmented and consists of many stakeholders who are involved in the provision of diverse activities and

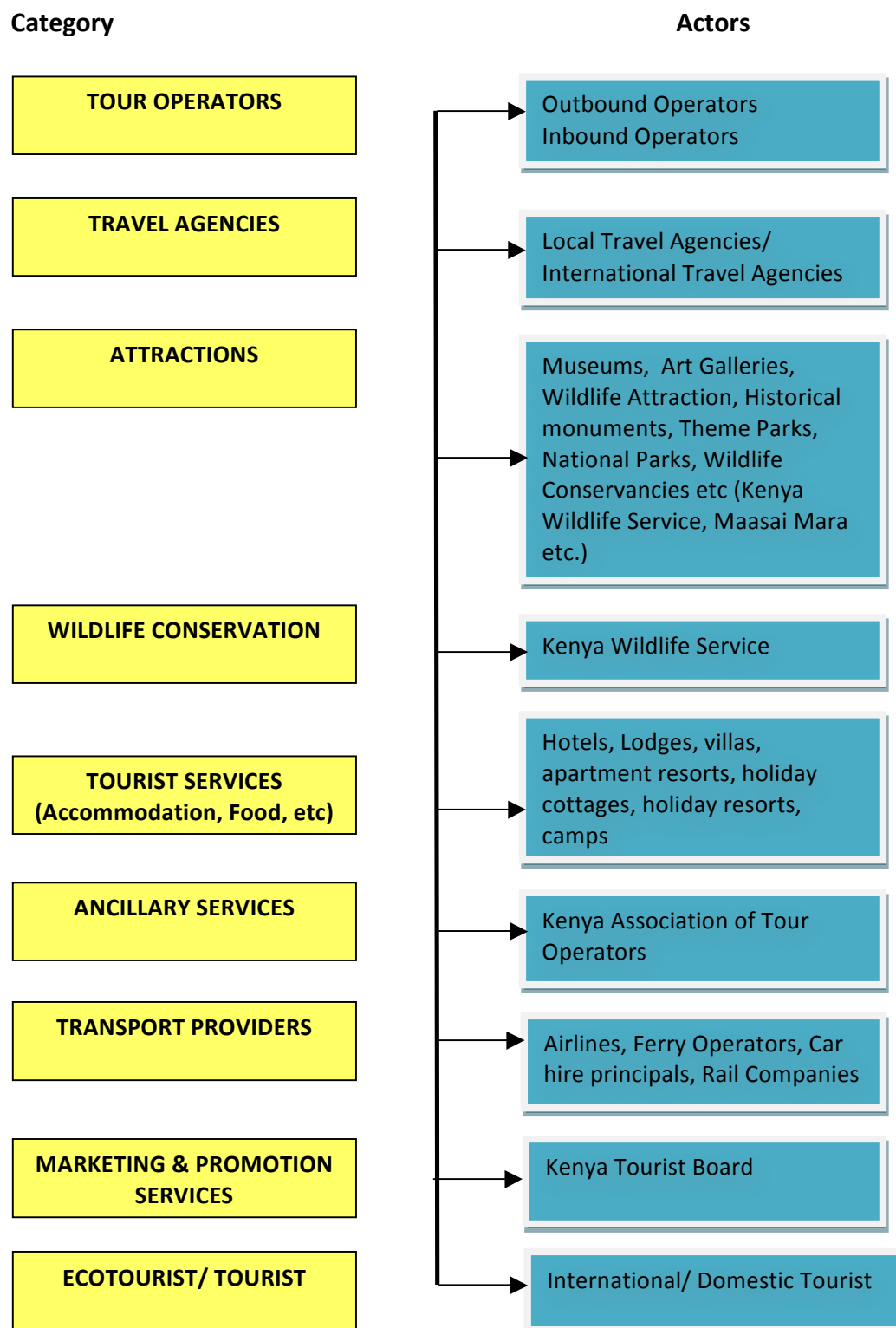
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services. These stakeholders include hotels, tour operators, travel agents, ancillary service providers, private villas and other professional associations. Figure 1 shows a schematic representation of the actors in the sector. The sector is governed by the Tourism Act 2011 which became operational in September 2012. The Act sets growth targets and spells out strategies on how the government and private sector would develop tourism so that it becomes one of the Kenyan's leading economic activities.

Figure 1: Schematic representing cross-sectoral nature of the tourism sector



The internet is integral to the development and functioning of the digital or information economy. Access to superfast broadband is seen as vital to the future growth of the Kenyan economy. It has the potential to increase growth, innovation and productivity. Harnessing the power of the Internet is an important issue for stakeholders in the tourism sector. Broadband internet has become an essential input for a number of sectors of the economy and the society as a whole.

Broadband internet has enabled the tourism industry to become a global market place. Players in the industry have to fit in the new structure or risk reduced margins and other negative effects of increased competition. For example, prices of products and services can be more easily compared over the internet, bringing more openness in the whole tourism chain. Kenya has witnessed revolutionary development of information communication technologies, especially the recent development in Internet with the arrival of the undersea fibre bandwidth in East Africa in 2009/2010. This development has led to changes in the tourism sector in Kenya and the East African region. This paper investigates the impact of broadband internet and related technologies on the tourism sector in Kenya.

### **Objectives and methodology**

The main objective of this paper is to examine how broadband internet and related ICTs have impacted the tourism value chain in Kenya. The study compares the period before and after the fiber optic broadband internet arrived in Kenya in 2009/2010 to unravel how these technological infrastructure is transforming the tourism sector. The paper is based on a wider study whose main objective to expand our understanding of the social and economic impacts of broadband connectivity and related ICTs in the context of development in Kenya and Rwanda. It focuses on three economic sectors in each country: tea production, tourism and business process outsourcing (BPO)/IT enabled services (ITES). This paper is limited only to the tourism sector.

Data was collected through an exploratory survey of 40 organizations in the tourism sector in Kenya. The participants of the study included both big players and small players, both foreign and local operators in the industry so as to make our sample more representative of the tourism sector. Initial interviews were held with the sector associations to give an overview of the sector and to assist in recruitment of institutions to participant in the study. These associations included the Kenya Association of Tour Operators (KATO), the Kenya Association of Travel Agents (KATA) and the Kenya Association of Hotelkeepers and Caterers (KAHC). The Kenya Wildlife Services (KWS), which acts as both a regulator and operator in the tourism sector, was also approached to suggest the most appropriate national parks to select. Once in-depth understanding of the sector was gained through these initial interviews with key sector associations and KWS, the sample of organizations to participate in the study was based on convenience.

Interviews were held with sales managers, directors, general managers or deputy general managers from tourism authorities in Nairobi, tour operators in Nairobi, travel agencies in Nairobi, hotels in Nairobi and Malindi (coastal town), taxi operators in Nairobi and Malindi, beach operators in Malindi, national parks (Tsavo West National Park and Malindi Marine Park), tour guides in Nairobi and the national parks and ancillary service providers in Nairobi and Malindi. Data was collected over twelve months, between April 2012 and March 2013. Data was also collected by review of secondary data, including policy, legal and other documents.

The main objective of the interviews was to establish how faster internet has impacted the value chains of players in the sector, whether faster internet had enabled them get more clients directly, or whether the faster internet had cut off or reduced the need for intermediaries in the sector. Interviews lasted between one hour and two hours and were conducted by the Principal Investigator and a Research Assistant, the two authors of this paper. All interviews were recorded using a voice recorder and supplemented by field notes.

There were two main challenges in this study. One is that given the sampling strategy (convenience), it is possible that companies who were significantly impacted or were not impacted by faster internet did not actually participate in the study. The effect of this was reduced by focusing on both large and small players. In addition, given the interviewees were mostly CEOs, Managing Directors and Sales Managers, these persons did not know everything about the subject matter and thus were faced with challenges in answering questions, especially on the more technical aspects of the inquiry. This was addressed by requesting to interview the person responsible for ICT, which was granted in most situations.

Data analysis was carried out through coding of all interview logs and transcriptions in order to identify and determine the most dominant concepts found in the dataset using NVIVO, a qualitative data analysis tool. The coding was done by the Research Assistant and validated by the Principal Investigator. The emerging findings were then divided into thematic categories and summarized. This paper provides initial findings from a preliminary analysis of the evidence using Michael Porter's Five Forces Model as an analytical lens.

## **Relevant literature**

The proliferation of the Internet, as a main-stream communication media and as an infrastructure for business transactions has generated a wide range of strategic implications for businesses in general as well as for the travel and airline industries in particular (Li-Hua and Khalil, 2006). Specifically, the internet has changed the way people communicate, search information, make decisions, and particularly the way in which they buy goods and services. The internet enables buyers to shop around for better prices. They are thus less loyal to a specific supplier because of their ability to shift to any other supplier who can meet their requirements. In the tourism sector, tourists and travelers are able to contact suppliers or travel agents directly without having to go through intermediaries.

Information and communication technology generates fundamental changes in the nature and application of technology in business (Gholami et al., 2008). ICTs can be powerful strategic and tactical tools for organizations, which, if properly applied and used, could bring great benefits in promoting and strengthening competitiveness. In the tourism sector, the internet has led to competition thus leading to price wars, increasing the bargaining power of buyers. At the same time, it has decreased the bargaining power of suppliers as it has reduced the need to buy from only a few suppliers.

The internet and related ICTs allow new players on the market to implement effective low-cost direct distribution strategies and intensify competition in the sector (Dennis, 2007; Buhalis and Law, 2008). For example, tour operators and travel agents have become more competitive, as the internet has provided a cost-effective platform for them to reach out to their customers.

Only a few studies demonstrate the benefits of broadband internet at the national level. Notably, Crandall and Jackson (2001) estimate the consumer surplus and producer benefits associated with broadband internet access and highlight the importance of network effects and associated decrease in transportation and production costs.

In Kenya, we are not aware of any empirical work that has been done on the socio-economic effects of broadband internet in the tourism sector. We argue that this may be due to the fact that real broadband internet has only been available recently, 2009/2010. This study examines the observable socio-economic effects of broadband internet access and use in the tourism sector.

We considered a number of conceptual frameworks to analyse the qualitative data collected. One was the Actor Network Theory (ANT). ANT's aim is to describe a society of humans and non humans as equal actors tied together into networks built and maintained in order to achieve a particular goal (Latour, 1991). This theory stresses the fact that these networks do not act in isolation but are built in and have to be maintained in order for goals to be achieved. Although this theory was deemed relevant, Michael Porter's Model of Competitive Advantage (Porter, 1985), commonly referred to as the Five Forces Model, was deemed more relevant. The model identifies five forces that determine the state of competitiveness in a market. All these five forces determine the ultimate profit potential of firms in the industry. The five primary forces are: threat of new entrants, rivalry among existing firms within an industry, threat of substitute products/services, power of suppliers and power of buyers. Each of the five competitive forces influence the dynamics of an industry. Four of the five forces that influence the industry come from outside entities that "surround" the industry including the buyers and suppliers. The fifth force comes from within the industry itself and has to do with the rivalry between the industry players.

Porter's Five Forces Model is very well known among academics and business professionals. It has been used extensively and can be applied to the analysis of many industries facing

competition. Most published work related to Porter's model and the internet has been to observe the effects that the internet as a technology has on certain industries.

A study by Siaw and Yu (2004) evaluated the effects the internet had on the competitive environment in the banking industry using Porter's model. The study found that the internet had greatly shifted the competitive landscape of the industry, offering both opportunities and threats to banks. The internet had made it much easier for smaller companies to enter the market and/or have access to clients that were geographically more dispersed. This lowered the barriers to entry. The internet had leveled the playing field for players. Banks can offer their services online thus reducing the operational costs, especially branding and advertising costs. With a majority of banking services being offered online, the internet had created a substitute for physical banking.

The literature base on the use of the Five Forces Model in the tourism industry is sparse, particularly in the realm of strategic and competitive analysis. However, we believe that most of the factors identified in the model are relevant to the tourism sector as well as any other service-oriented business. Illustrative examples are outlined below.

- a) *Bargaining power of suppliers.* Through faster internet the bargaining power of suppliers can be increased. Suppliers are able to access more customers. This enables them to provide better services. By enabling the reduction of entry barriers and increasing the number of competitors, the internet will in turn increase the power of the suppliers.
- b) *Threat of new entrants.* New entrants to an industry bring new capacity, the desire to gain market share, and often substantial resources (Porter, 1979). They are deterred by the existence of barriers to entry, which represent the cost challenges that derive from attempting to join an industry (Porter, 1980). Therefore, barriers to entry are very important in determining the threat of new entrants.
- c) *Rivalry among existing competitors.* The Internet brings many more companies into competition with one another by expanding geographic markets and reducing entry barriers. It can raise the rivalry within the industry and increase the pressure for price discounting (Porter, 2001).
- d) *Threat of substitutes.* The Internet offers new possibilities and instruments to meet customer needs by offering new products and services, which could substitute existing ones (Porter, 2001). The Internet creates new substitution threats. Travel agents and tour operators are slowly being replaced by the Internet. The Internet is enabling a direct link between travel suppliers and travel consumers. The threat of substitutes depends on factors such as price performance of substitutes, switching costs and buyer propensity to substitute. This threat may be lowered by building a strong brand identity or by increasing switching costs. The threat of substitution may be also affected by technological advancements (Porter, 1980).
- e) *Bargaining power of customers.* Faster internet and related ICTs have significantly improved the distribution channels by simplifying the process of obtaining tourism products and services. The customer can easily compare different prices and gain

knowledge about products. Customers can purchase tourism products and services using the website at any time. Through the Internet they can choose from a wide range of suppliers and they find it easy and inexpensive to switch to alternative suppliers. at the same time, the price has become the most important decision criterion (Bakos, 1998). Powerful customers are able to exert pressure to drive down prices, or increase the required quality for the same price, and therefore reduce profits in an industry. Customers tend to enjoy strong bargaining power when there are only a few of them, the customer purchases a significant proportion of output of an industry, they possess a credible backward integration threat.

From the above illustrations, this model therefore provides a useful framework for analyzing the impacts of broadband connectivity and related ICTs on the structure of the tourism industry. We now present preliminary results of analysis and discussion.

## **Results and discussion**

Generally we found that the majority of the respondents had embraced broadband internet and related ICTs. These include internet connectivity, information systems applications (online reservation systems, online marketing systems, online payment systems, etc.), web hosting, social networks (LinkedIn, YouTube, FaceBook), third party websites, and so on. The players use these ICT platforms to market their packages and wait for inquiries from clients who are globally dispersed. Other respondents mentioned that they had more than one website at their disposal just to boost their chances of being found online. We now present and discuss results after preliminary analysis of the evidence using Porter's Model of Five Forces Model as our conceptual lens.

### **Rivalry among existing competitors**

With regard to the impact of the Internet on the rivalry among existing competitors, respondents revealed that rivalry was intensified after the emergence of the Internet due to lowered barriers to entry. That in turn led to an increase in the number of competitors. New entrants have had the ability to be represented in equal terms with the existing rivals and maximize their market share. Interviewees suggested that the emergence of the broadband connectivity resulted in reduction of organizational costs.

We also found that broadband connectivity had enabled existing players to access wider markets because of the ability to form global and local partnerships. They can therefore pose competition in new areas with these partnerships enabled by technology. We also found that broadband connectivity had enabled many players to access clients directly, without going through intermediaries, thereby increasing competition for market share. This was aptly captured by respondent R15 when they said:

*"... There has been growth in the use of ICT in conference tourism, so video conferencing is growing also because of ICT. We are seeing a lot of non-traditional operators growing because they are able to use ICT to reach markets which traditionally they would not*

*have been able to access. The way tourism is structured in Kenya is that the big boys will always be big boys and the small people struggle.... Because of ICT we are seeing operators now who are able to access clients individually without having to go through the many channels, and like the Camel Derby in Maralal that has grown because of ICT largely .... People are booking directly and because of channels like YouTube. This guy was speaking at some conference and was saying two years ago someone recorded the Camel Derby and he put it on YouTube and they started getting inquiries. It is not even them who had put it on YouTube, it is one of the clients who put it and they started getting inquiries and they realized that they can actually use this thing to generate interest."*

Respondent R26 from one of the hotels confirmed that they use the internet as a tool for competitive advantage over their competitors. The respondent said:

*"I have been checking my competitor. We are the only ones in Kenya who can really offer online confirmation of packages. Okay many people allow you to inquire online but you have to wait for a response. Our system is fully integrated; you can get information of your package, you can book your package, you know the system is linked to our reservations system. We have another system here for bookings and allocations and all that. So our online reservations system is linked to that so you can do your confirmation. Your rooms get really confirmed when you book. It is integrated with a payment gateway ... a payment gateway so you can pay online. You get your travel insurance online. We have a link to the American Insurance Group. So basically when you book your safari and you have insurance, your policy is created automatically. So everything happens real-time which again I have checked with my competitors and nobody is offering that at the moment. We are the only ones who have a comprehensive system from getting your information to printing your itinerary to processing payment and getting your insurance all that is done online".*

Another respondent R10 mentioned that:

*"... there has been growth in the use of ICT in conference tourism. So video conferencing is growing. Also because of ICT, we are seeing a lot of nontraditional operators growing because they are able to use ICT to reach markets which traditionally they would not have been able to access. The way tourism is structured in Kenya is that the big boys will always be big boys and the small people struggle.... Because of ICT we are seeing operators now who are able to access clients individually without having to go through the many channels, and like the Camel Derby in Maralal that has grown because of ICT largely .... People are booking directly and because of channels like YouTube."*

What is interesting about the above account is that a client recorded the Derby and uploaded it on YouTube. A new holiday destination, to compete with other existing destinations, had been created and marketed through technology. Although the community conservancy hosting the Derby is very remote with hardly any internet connectivity, it has now become a popular destination and many tour operators now include it in their promotion material.

### **Bargaining power of suppliers**



Respondents claimed that the bargaining power of suppliers had increased. Broadband connectivity had enabled suppliers not only to access more cost-effective distribution platforms but also to interact directly with their customers. As an example, one of the respondents indicated that Thomas Cook had increased the sales of one of their packages by 30% by carrying out a facebook campaign.

Another respondent, R20, a tour operator, exemplified the role of the internet and resources available in websites in enhancing the power of suppliers of tourism services when they observed:

*“As an operator or a service provider, I will do the research on the interest of the client on the internet. After getting all the research, I will give the client the information, after approval then we make a deal and it becomes a done deal. That is how we work. But it is tricky because of honesty. Most of the things depend on referrals, you know recommendations and referrals. We have internet, we have our website and all that but even if you have all those details there are those referrals that guests will look at because you will find that most of the people that are, the big companies..., you will find that they have got travel agents outside”.*

This respondent brought out one of the key challenges of computer-based technology; honesty and trust. This limits the extent to which travel operators can become virtual.

Respondent R18, a travel agent, illustrates the role of social media in enhancing the power of travel operators to attract customers when he stated:

*“Well those are tools that give you more presence, they allow you at a very low cost to have presence in very many different places. So of course it is a very important selling tool that you need to use and actually is not something in the future, it is already happening.”.*

### **Bargaining power of customers**

As far as the impact of the Internet on the bargaining power of customers is concerned, respondents claimed that the bargaining power of consumers had increased. Through the internet, buyers are able to research on travel options, compare prices and make reservations for hotels and airlines. The Internet had therefore led to significant savings in terms of money and time for buyers. In addition, the increased transparency, for example of cost of services and tour packages, had enhanced the bargaining power of buyers while at the same time reducing the bargaining power of suppliers. This is because transparency had intensified price competition and rivalry. As a result, buyers are less loyal to specific suppliers as they shift easily to the ones that meet their requirements. With the internet, therefore, the bargaining power had significantly shifted from the suppliers (tour operators and travel agents) to the customers.

The respondents also claimed that faster internet replaced traditional travel agents with online travel agents. As an initial response to use of the Internet by consumers, airlines attempted

disintermediation. By selling direct to the consumer, airlines were able to offer prices and value-added services unavailable to travel agents. Intermediaries are quickly filling the gap by providing applications that directly link suppliers of service to their consumers. These are online travel agents, such as Expedia. The specialized technology required to make direct bookings is now available to the consumer, often at lower cost than booking through a traditional travel agent.

In addition, a number of respondents pointed out that some of the airlines, especially Kenya Airways, had started providing tour packages to customers booking flights with them. This is a case of forward integration; a travel agent becoming a tour operator.

In response to a question on how broadband internet and related technologies are changing the tourism value chain, a tour agent mentioned that they used the internet to negotiate terms with their customers, tour operators and hotels.

### **Threat of substitutes**

It can be argued that online sales are the near substitutes for traditional service provision by travel agencies and tour operators. For example, through the internet, customers are able to engage hotels directly without having to go through travel agencies and tour operators. Our research found mixed views with regard to the threat of substitutes. On the one hand, the internet had made it easy to directly match buyers and sellers, and as a result the role of intermediaries may be reduced or even eliminated, thus leading to disintermediation. Our study found evidence that the hotel chains had great interest in better utilizing internet sales. This evidence was supported by numerous claims by travel agents and tour operators that hotels were trying to cut them off the value chain by moving their businesses online. This is illustrated by one respondent when they claimed:

*"Yes, that has been a bone of contention between us. The hotels were supposed to be fed by tour operators over the years. They have decided that they cannot trust us with their hotels, so they have also set up desks to sell the tours. In fact we used to attend exhibitions, we do not go anymore. Reason I don't go to exhibitions is, I am here with Hilton, I am selling Hilton and they are undercutting me by giving better deals. They are there also competing with me".*

In most of the cases, the hotel rates on the internet is cheaper than the rates given to tour operators. This is best captured by this comment from respondent R16, a policy maker:

*"A hotel is offering direct on the internet a rate lower than what they have given you as a tour operator to sell to the outside world. But the website is much lower. So book through the internet. What they don't understand is that they are tapping out by offering a cheaper rate cutting the legs of the people who normally consolidate and bring customers to them. I have a friend who was trying to book a hotel in Mombasa and they were being charged KES 12,000-13,000. Then they called one operator who is German and she booked through the German website and got the same room for KES 4,000. If you check the external websites, you will get a cheaper rate."*

The hotels claimed that through disintermediation, products and services are directly offered to the consumers. This reduced the cost, for example, of commissions that have to be paid to intermediaries.

On the other hand, there is the view that broadband connectivity and related technologies will not replace the intermediaries. Although there was evidence that several travel agents had closed their business, a number of respondents argued that tour operators are changing their strategy and embracing the internet. Others were of the view that tour operators needed to do value addition on their packages in order to survive. This was aptly captured by respondent R16, a policy maker, when he remarked: *"... If what you are offering is exactly the same as what I can get on my own through the internet, what is the value-add? Look at your package and do a value add."*

Another policy maker, respondent R15, seemed to hold a view that tour operators will not be replaced by broadband internet and related technologies when he asserted:

*"It is reduced (role of tour operators) but it is still there. You need someone to take you around because even if you will be able to get into Nairobi and take yourself to Panafric Hotel, if you are going to Maasai Mara Game Reserve or go to Lake Nakuru National Park, you want someone who knows. You want someone who will tell you that the gestation period of an elephant is 48 months and this is what happens. You have all that information, you can get it online but I think it is more emotional when you are talking to someone who is a local - when you are talking to someone who is telling you that this lodge was built by local people and your being here is helping take a child to school and makes you feel good that you are actually contributing to the economy of the place."*

On the other hand, there is the view that broadband connectivity and related technologies still provide the clients with substitute platforms to purchase products and pay for services rendered. The comment below from respondent R22, a travel agent, illustrates that the substitute platform is in competition with the traditional method of using travel agents:

*"We book airlines. So instead of a client going to an airline directly to book a seat to whatever it is they want to fly, there is the avenue that we provide. So that they can come to us and book with us. If one wants to go to Mombasa they can go to Kenya Airways and book for their ticket directly at Kenya Airways but as an agent, we can also do the booking on Kenya Airways on their behalf and for that Kenya Airways gives us a commission.... If a client wants to book a hotel anywhere, they could go there directly but there is also the channel where they can use us as agents. So what we do is we book ... we can book Serena for this client and in turn Serena gives us a commission, so that is the arrangement".*

As a summary, there was overwhelming evidence that it will be difficult for broadband connectivity and related technologies to completely replace travel agents and tour operators for the following reasons: not all customers have embraced the new technology; connectivity is

not universally available to all potential tourism customers; and not all customers have the time to spend on the internet looking for bargains. In addition, many tourism destinations do not have adequate online content in the web portals for customers to make decisions; and some customers lack the knowledge to use electronic gadgets, access internet, search for information, and so on.

From the above evidence, broadband internet and related technologies are changing the industry structure. It has achieved a certain degree of disintermediation. This is for example by getting rid of travel agents that do not embrace the new technology and creating virtual equivalents of travel agents and tour operators. However, there is also evidence that the new technological platform will not necessarily replace tour operators. It seems to suggest disintermediation and intermediation will co-exist for the foreseeable future.

### **Barriers to entry**

Respondents suggested that the broadband connectivity and related technologies had lowered the barriers to entry. These technologies had drastically reduced start up, distribution and operational costs. For example, new entrants had been able to represent themselves to customers through websites and social media, thereby threatening the position of existing rivals and their control of the market. The internet as a distribution channel had enabled a wide range of players, both new and existing ones, to enter the market. Suppliers are also now able to access a wider market using internet and related technologies. This reduction in barriers to entry had in turn intensified competition.

At the coast, we found that the internet and related technologies had enabled beach and other informal operators to be able to enter into the formal tourism business and compete with existing players. With assistance from friends and some tourists, the beach operators were able to create websites in different languages to target different markets and to interact with potential customers through email and facebook. For instance, one of the policy makers gave the example of a young lady who had converted her house into a home stay and created a steady business, with sales being done through a website. He added that she had a daughter who lived in USA who helped her with marketing. Respondent R15, a policy maker, had the following opinion with regard to how the internet and related technologies were changing the barriers to entry:

*“ICT is definitely helping the smaller people compete on an ... not equal but equitable platform with the bigger and more experienced people. And they are doing it at a faster rate because the bigger ones still want to continue with business as usual. Change is very hard for them and also because the levels of hierarchy for decisions making are very high. So you find a lot of people... especially young people, are really embracing this.”*

When asked a whether broadband internet will change the structure of the tourism industry, the same respondent R15 was of the following view:

*"It will in a big way. Just that we will not be slicing the cake into smaller pieces but for me in my head, broadband internet is enabling us bake a bigger cake... The big ones who choose to diversify are getting a bigger or a similar share of the bigger cake."*

In other words, broadband internet and related technologies had reduced the entry barriers but they had at the same time facilitated the growth of the market.

### **Challenges**

In addition to the analysis using Porter's Five Forces Model, the study found challenges with adoption of broadband internet and related ICTs that we felt could add value to this paper. The first challenge is the cost of developing and maintaining the ICT platform. For example, one respondent complained that the cost of developing and maintaining a website was too expensive for his business. He also complained that clients were not able to use third party websites and online booking systems due to lack of access to ICT infrastructure. This cost challenge was best illustrated by one respondent when he argued about the cost challenge of website optimization:

*"Optimization because I am getting a lot of requests from India, US people trying to tell us how they can improve our visibility in the internet. Yeah but it is not for free. You have to pay money. We have tried here, we have a site and we have to employ somebody to develop it and it costs money. In fact Google does it on hits. I used to do it on hits and it is very expensive. When they charge you on the hits you have, you see because not every hit translates to business, so we tried that and found it to be very expensive. So for optimization is for those who can afford to have something. You see even our graduates here I don't think they are very smart on that. And you need to employ them and they are very expensive and their work is just to try and improve your ranking online. There are people who say they have such things in India and in the US but they ask for a lot of money".*

There were a number of respondents who felt that the cost reduction that was promised with fibre-optic broadband was never realized. One respondent seemed to complain that internet prices had not reduced with the landing of under-sea fibre connectivity as promised by the policy makers. Although this sounds like broken promises, the reality is that the cost of broadband internet connectivity had come down, but perhaps not in the way and to the level most players had expected. This could partly be because broadband internet service providers took a strategy not to reduce customers' bills but provided customers with more bandwidth for the same price. This was to encourage consumption of the increased capacity and to prevent their revenues from dipping. Customers therefore never realized a reduction in their recurrent internet costs.

A second challenge is with respect to lack of skills to sustain the ever-changing technology. For example, one respondent mentioned that his firm was not able to use social media because they lacked the skills and ability to create a social media profile for their business. A third challenge concerns online payment platform. This was captured by another respondent as

follows: *“... They (customers) can correspond online but they are not booking online because the infrastructure is not there particularly for passing value. Money transfers are not there, that is one hindrance. In fact if we can get one... if that can be made available it would make life very easy”*. However, there is a plethora of online payment platforms available, which possibly this respondent was not aware of. Those who are aware of such platforms claim that they are too expensive. For example, one respondent mentioned that Pesapal charges 12% of the transaction value, which is deemed to be too high. Another related challenge is lack of adequate trust and security of online transactions.

A further challenge is information overload. With faster internet, information is far more accessible than ever before. A number of respondents felt that there was too much information online that it ends up confusing them. They mentioned that the information overload makes it virtually impossible to understand the subject at hand and hinders decision-making processes. The problem of information overload is becoming more widespread with the development and growing availability of the internet. A dichotomous challenge is an apparent lack of online information in the websites of tourism destinations for clients to make informed decisions. In some cases, a tour operator would intentionally provide inadequate information so as to encourage offline interaction with the clients for more information and to extract a commitment.

The final challenge is the quality of the broadband connectivity. Several companies reported poor availability of the internet connections while others experienced inadequate connectivity speeds.

## **Conclusions**

We found evidence that broadband internet connectivity and related technologies had helped intensify competition between existing players. This was largely through the ability of these technologies to expand market through widened local and global partnerships, to lower barriers to entry, and to access clients directly without going through intermediaries. Broadband internet and related technologies had also increased the bargaining power of suppliers by offering more cost-effective distribution platforms, offering resources to carry out research to meet customers' requirements and enabling direct interactions with customers. However at the same time, these technologies had enhanced the bargaining power of customers vis-à-vis suppliers. Broadband connectivity and related technologies achieved this through the cost transparency that they cause and the cost savings they enable. They also enable customers to access a wide range of suppliers, reducing their loyalty to specific suppliers.

With respect to the threat of direct online service provision becoming a substitute for the traditional travel agencies and tour operators, our study found mixed results. On the one hand, hotels and other tourist destinations were making concerted efforts to cut out intermediaries by moving their businesses online. This way, some customers booked directly to these

destinations without going through intermediaries. This is a case of disintermediation. It can of course be argued that those intermediaries who do not change their role in line with the changes brought about by the new technologies, will in all likelihood, go out of business.

On the other hand, there were still customers who believe in the role of travel agents and tour operators. While acknowledging that internet connectivity and related technologies were transforming the tourism sector, several policy makers were of the view that these intermediaries are still required, largely because of trust issues – only their role will change. There were also other reasons why intermediation will still be required as argued earlier. We therefore conclude that intermediation and disintermediation will co-exist for the foreseeable future.

As argued under rivalry between existing competitors, broadband connectivity and related technologies had lowered the barriers to entry by drastically reducing start up, distribution and operational costs, as well as enabling suppliers to access a wider market. Notably, the technologies had enabled beach and other informal operators to be able to enter into the formal tourism business and compete with existing players.

The paper has highlighted five key challenges to the adoption of broadband internet and related ICTs. These are the high cost of developing and maintaining the ICT platform; lack of skills to sustain the ever-changing technology; and inadequate online payment platforms, including their related problems of high cost and lack of adequate trust and security of online transactions. Other challenges are information overload and its apparent dichotomous challenge of inadequate online information in certain circumstances; and inadequate quality of the broadband connectivity.

Finally, the paper has made a contribution on the effects of broadband internet in the tourism sector based on rich empirical evidence. This is one of the few studies in this area and the authors recommend other researchers to initiate research on the impacts of broadband on other sectors.

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